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I hereby appoint:

Application Number	09/912,068
Filing Date	July 23, 2001
First Named Inventor	Zhang, Song et al.
Title	Method and System for Turbo Encoding in ADSL
Group Art Unit	To be assigned
Examiner Name	Unassigned
Attorney Docket Number	20510-001700US

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I am the: Applicant/Inventor. Assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96).								
SIGNATURE of Applicant or Assignee of Record								
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Signature								
Date	10 00 2001							
NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.								
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Attorney Docket No. 020510-17.00

STATEMENT L	INDER 37 CFR 3.73(b)					
Applicant/Patent Owner: Song Zhang et al.						
Application No./Patent No.: 09/912,068	Filed/Issue Date: July 23, 2001					
Entitled: System and Method for Turbo Encoding in ADSI						
Catena Networks, Inc. a De						
(Name of Assignee) (Type	of Assignee, e.g., corporation, partnership, university, government agency, etc.)					
states that it is:						
1. the assignee of the entire right, title, and int	the assignee of the entire right, title, and interest; or					
2. an assignee of an undivided part interest	an assignee of an undivided part interest					
in the patent application/patent identified above by virtue of either:						
A. An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the Patent and Trademark Office at Reel, Frame, or for which a copy thereof is attached.						
OR	•					
B. A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as shown below:						
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Additional documents in the chain of title are listed on a supplemental sheet.						
□ Copies of assignments or other documents in the chain of title are attached. □ Copies of assignments or other documents in the chain of title are attached. □ Copies of the original document or a true copy of the original document) must be submitted to Assignment Division in accordance with 37 CFR Part 3, if the assignment is to be recorded in the records of the USPTO. See MPEP 302.8						
The undersigned (whose title is supplied below) is empo	wered to sign this statement on behalf of the assignee.					
180 t 2001 Date	Signature					
	Andreas Weirich					
	Typed or printed name					
	Vice President, Systems Architecture					
	Title					

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Attorney Docket No.: 020510-001700US Client Reference No.: FMD-24/34/37

ASSIGNMENT OF PATENT APPLICATION

JOINT

WHEREAS, Song Zhang of 32 Sherk Crescent, Kanata, Ontario, K2K 2L3, Canada; Bin Li of 1316 Carling Avenue, Apt. 1908, Ottawa, Ontario, K1Z 7L1, Canada; Andrew Deczky of 732 Highland Avenue, Ottawa, Ontario, K0A 2K7, Canada; Alberto Ginesi of 111 Covington Place, Nepean, Ontario, K2G 6B6, Canada; hereinafter referred to as "Assignors," are the inventors of the invention described and set forth in the belowidentified application for United States Letters Patent:

Title of Invention:

METHOD AND SYSTEM FOR TURBO ENCODING IN

ADSL

Date(s) of execution of Declaration:

Filing Date:

July 23, 2001

Application No.:

09/912,068; and

WHEREAS, Catena Networks, Inc., a corporation of the state of Delaware, located at 303 Twin Dolphin Drive, Suite 600, Redwood Shores, CA, 94065, hereinafter referred to as "ASSIGNEE," is desirous of acquiring an interest in the invention and application and in any U.S. Letters Patent and Registrations which may be granted on the same;

For good and valuable consideration, receipt of which is hereby acknowledged by Assignors, Assignors have assigned, and by these presents do assign to Assignee all right, title and interest in and to the invention and application and to all foreign counterparts (including patent, utility model and industrial designs), and in and to any Letters Patent and Registrations which may hereafter be granted on the same in the United States and all countries throughout the world, and to claim the priority from the application as provided by the Paris Convention. The right, title and interest is to be held and enjoyed by Assignee and Assignee's successors and assigns as fully and exclusively as it would have been held and enjoyed by Assignors had this Assignment not been made, for the full term of any Letters Patent and Registrations which may be granted thereon, or of any division, renewal, continuation in whole or in part, substitution, conversion, reissue, prolongation or extension thereof.

Assignors further agree that they will, without charge to Assignee, but at Assignee's expense, (a) cooperate with Assignee in the prosecution of U.S. Patent applications and foreign counterparts on the invention and any improvements, (b) execute, verify, acknowledge and deliver all such further papers, including patent applications and instruments of transfer, and (c) perform such other acts as Assignee lawfully may request to obtain or maintain Letters Patent and Registrations for the invention and improvements in any and all countries, and to vest title thereto in Assignee, or Assignee's successors and assigns.

Assignors hereby authorize and request Townsend and Townsend and Crew LLP, Two Embarcadero Center, 8th Floor, San Francisco, CA 94111-3834, to insert herein above the application number and filing date of said application when known.

Assignment

Attorney Docket No.: 020510-001700US

Page 2

IN TESTIMONY WHEREOF, Assignors have signed their names on the dates indicated.

Dated: 04. 17, 200

Song Zhang

Dated: Oct 15 2001

Bin Li

Dated: Oct 31, 2001

Andrew Deczky

Dated: OCT. 26,2001

Alberto Ginesi

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